



# FIS Metadata Catalog



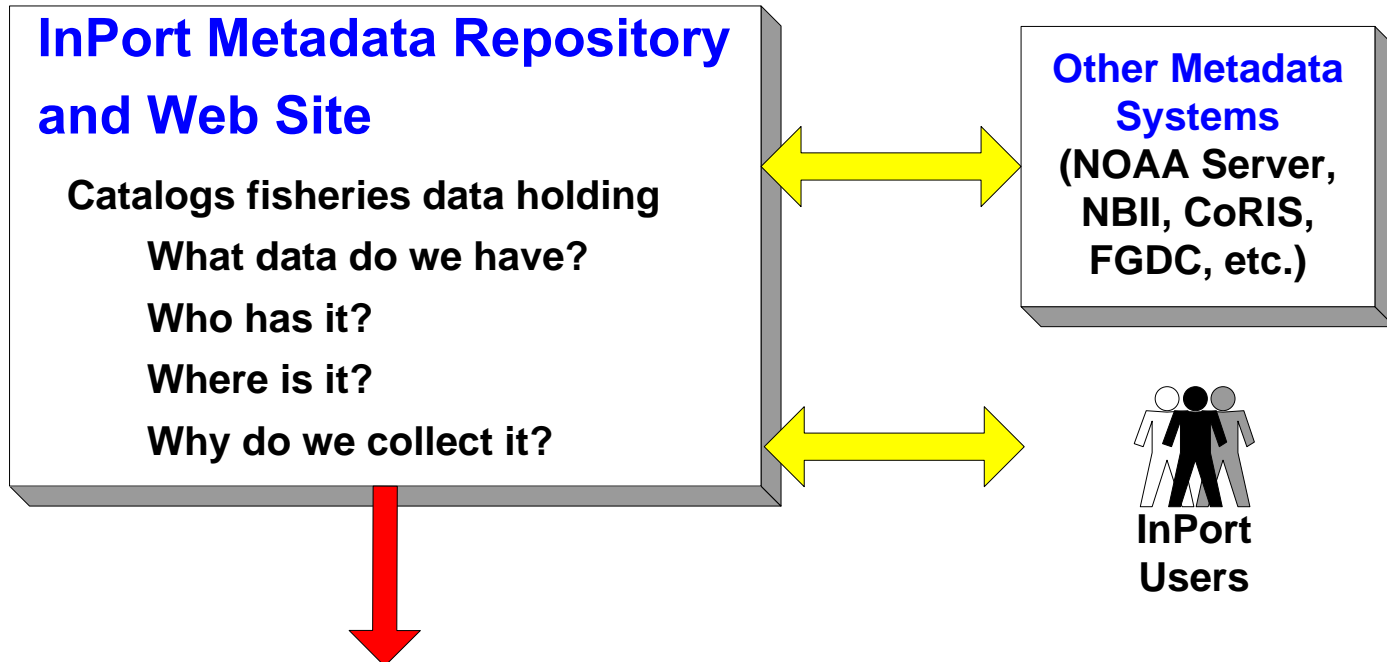
National Fisheries  
Information System

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InPort

**InPort Development, Maintenance & Support**  
Project Sponsor and Manager, Karen L. Sender  
NOAA Fisheries, Pacific Islands Fisheries Science Center  
2007 National FIS Meeting, 21 August 2007

# What is InPort?



## InPort Supports Critical FIS Activities

Inventory Fisheries  
data holdings

Document details  
required by FIS

Integration analysis  
and planning

Information  
Management &  
Quality Planning

## Fisheries Information System (FIS) Program

- ***Catalog Metadata Population***
  - 10 Libraries
  - 1600+ catalog items
  - 100+ data sets
  - ~500 data tables, ~6000 columns
  - ~300 procedures
  - ~300 documents
- ***InPort v. 1.0 (2/2006)***
  - NERO, ACCSP, GulfFIN commitment
  - System and metadata support at PIFSC
- ***InPort v. 1.1 (8/2007)***
  - Enhanced user tools, modules, bug fixes
  - Advanced search capability

- ***InPort system migration (9/2007)***
  - PIFSC & ST6 cooperative effort
  - System environment is set up at HQ
- ***InPort v. 1.2 (early 2008)***
  - Additional modules
  - Metadata interfaces and exporting tools
- **On-going application maintenance**
  - Bug fixes
  - Quarterly status reports
  - Minor enhancements whenever possible

- Develop -> test -> acceptance test -> production
- Partner data management requirements
- User feedback
- InPort and metadata training
- Catalog status reports

- Searchable, national catalog of fisheries data
- Available to scientists and managers
- Supports analysis and re-engineering of data collection programs
- Paves the way for integrating data sets
- Promotes best practices
- Facilitates the sharing of data and information (FGDC, NBII, etc.)

# InPort Capabilities Required for FIS

- Inventory of Fisheries data holdings
- Detailed documentation of Fisheries data
- Provide metadata for data integration analysis and planning
- Share metadata

# Data Inventory to Support FIS

- Projects, programs, data collections
- Databases, data sets, spreadsheets, files
- Tables and Columns
- Documents
- Reports
- Statistical Models
- Data Processing flow

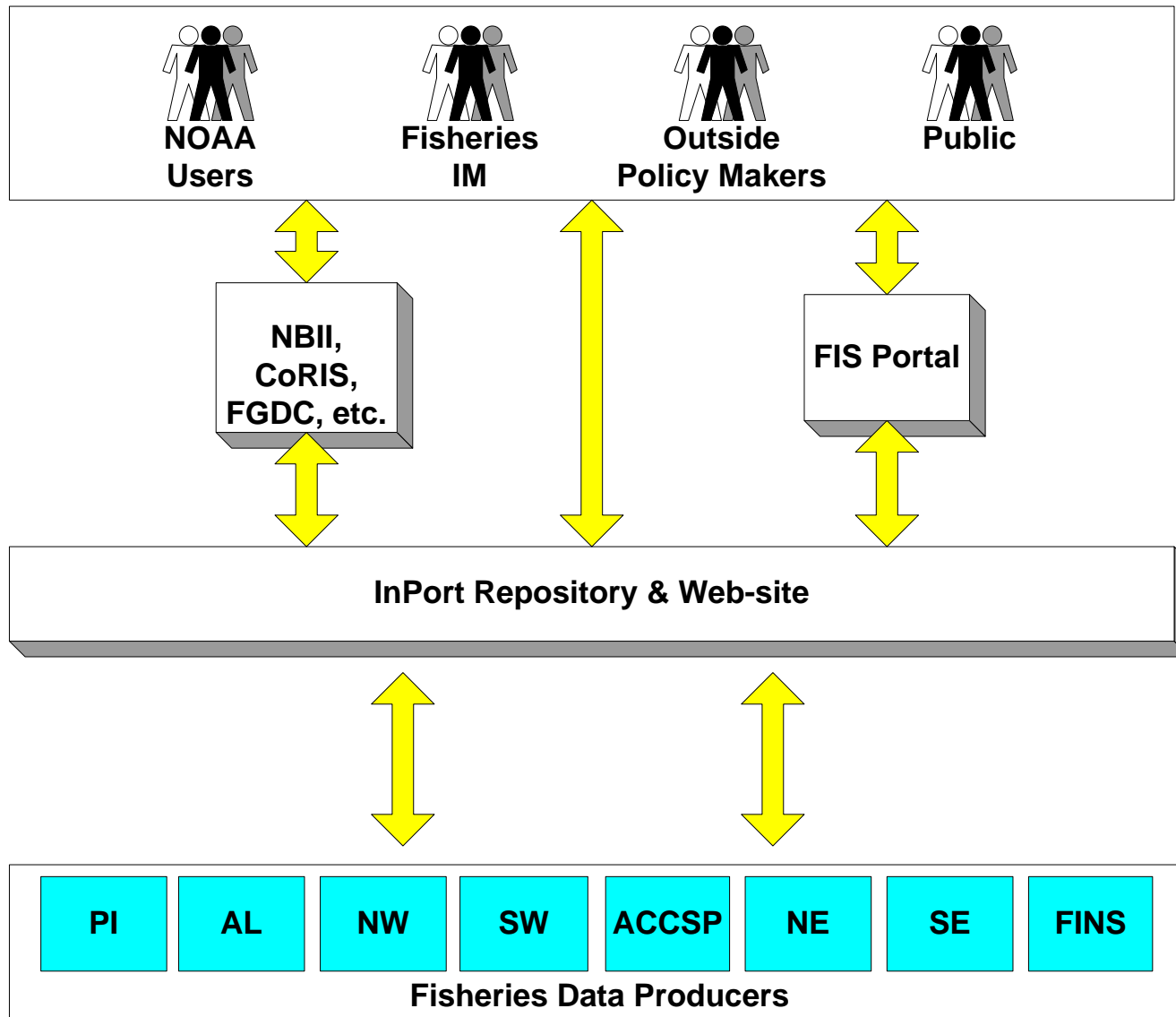


# Detailed Metadata

- Descriptions
- Keywords
- Time Frames
- Geographic Bounds
- Physical Location
- Related Catalog Items
- Usage Issues
- Available Downloads
- Access Information
- Person Roles and Responsibilities
- Quality Assurance Details
- FAQs
- Glossary Terms
- Acronyms
- Activities

- Create and promote data standards
- Design data integration schemes
- Answer “data calls” efficiently
- Share tools, expertise, technologies
- Promote data re-use
- Identify data gaps and redundancies

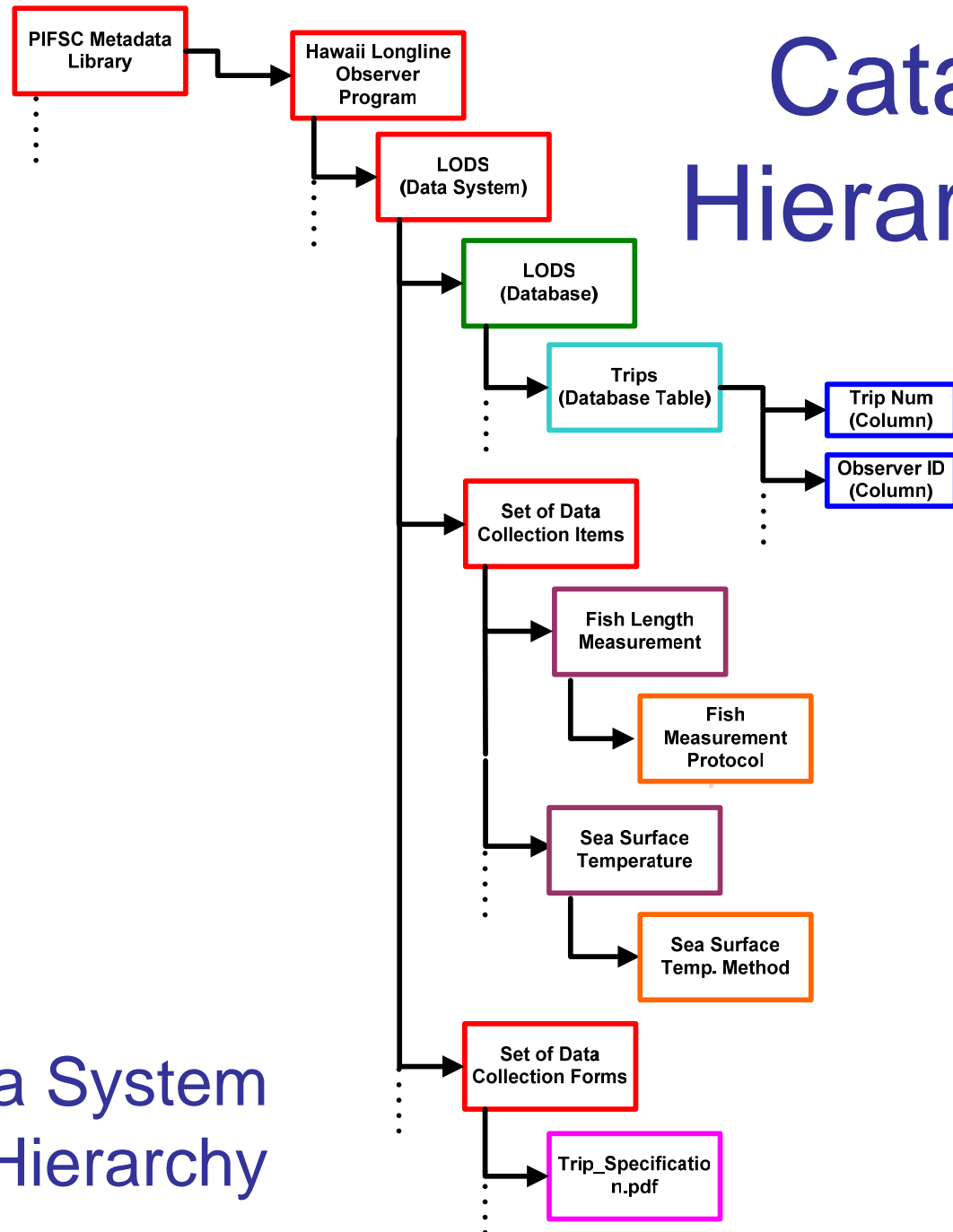
# Sharing metadata



- **Catalog Administration**
  - Library Manager
  - Administration Support
  - Workflow Control
- **Catalog Maintenance**
  - Catalog Editor
  - Table Column Loader
- **Catalog Searching**
  - Web Site
  - Metadata Search
- **Catalog Extraction**
  - XML to metadata consumers

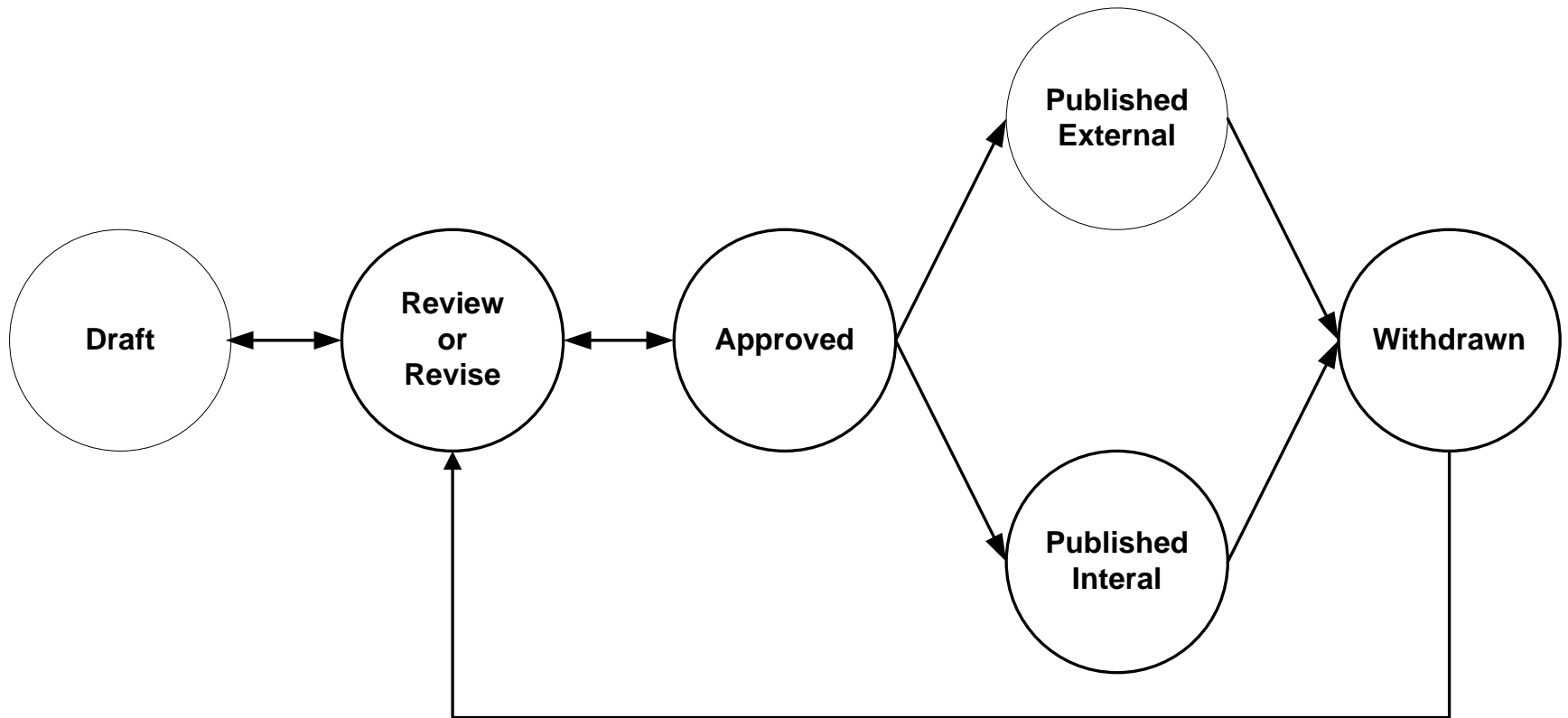
- **InPort Administrator**  
Library setup, system administration
- **Librarians**  
Add users, assign roles  
Load data dictionary
- **Publishers**  
Create, edit, review, publish/un-publish metadata
- **Authors**  
Create, edit metadata
- **Readers**  
View only

# Catalog Hierarchy



## Example Data System Hierarchy

# Catalog Workflow





National Fisheries  
Information System

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InPort



InPort Search slides next



# Searching InPort

You can search published catalog items.

InPort lists search results, summaries, and details.

The screenshot shows a web browser window titled "InPort - National Fisheries Information System - Mozilla Firefox". The address bar displays "https://ias.pifsc.noaa.gov/inp". The page header includes a navigation menu with "File", "Edit", "View", "Go", "Bookmarks", "Tools", and "Help". Below the menu are icons for "Back", "Forward", "Reload", "History", "Print", and "Stop". The main content area features a circular image of fish swimming underwater. To the right of the image, the text "National Fisheries Information System" is displayed in blue, followed by "InPort" in a large, bold, black font. A login status bar at the top right indicates "logged in as jdane" with links for "publish", "search", "help", and "logout". Below the fish image, there is a search section titled "Search the Catalog (...or see some advanced search options)". It contains a text input field with the word "Library" and a "Search" button. To the right of the search section, there is a section titled "About InPort ..." which contains a paragraph of text describing the FIS InPort Metadata Catalog and its role in fisheries management. At the bottom of the page, there are several small logos.

logged in as **jdane** | [publish](#) · [search](#) · [help](#) · [logout](#)

**National Fisheries Information System**

**InPort**

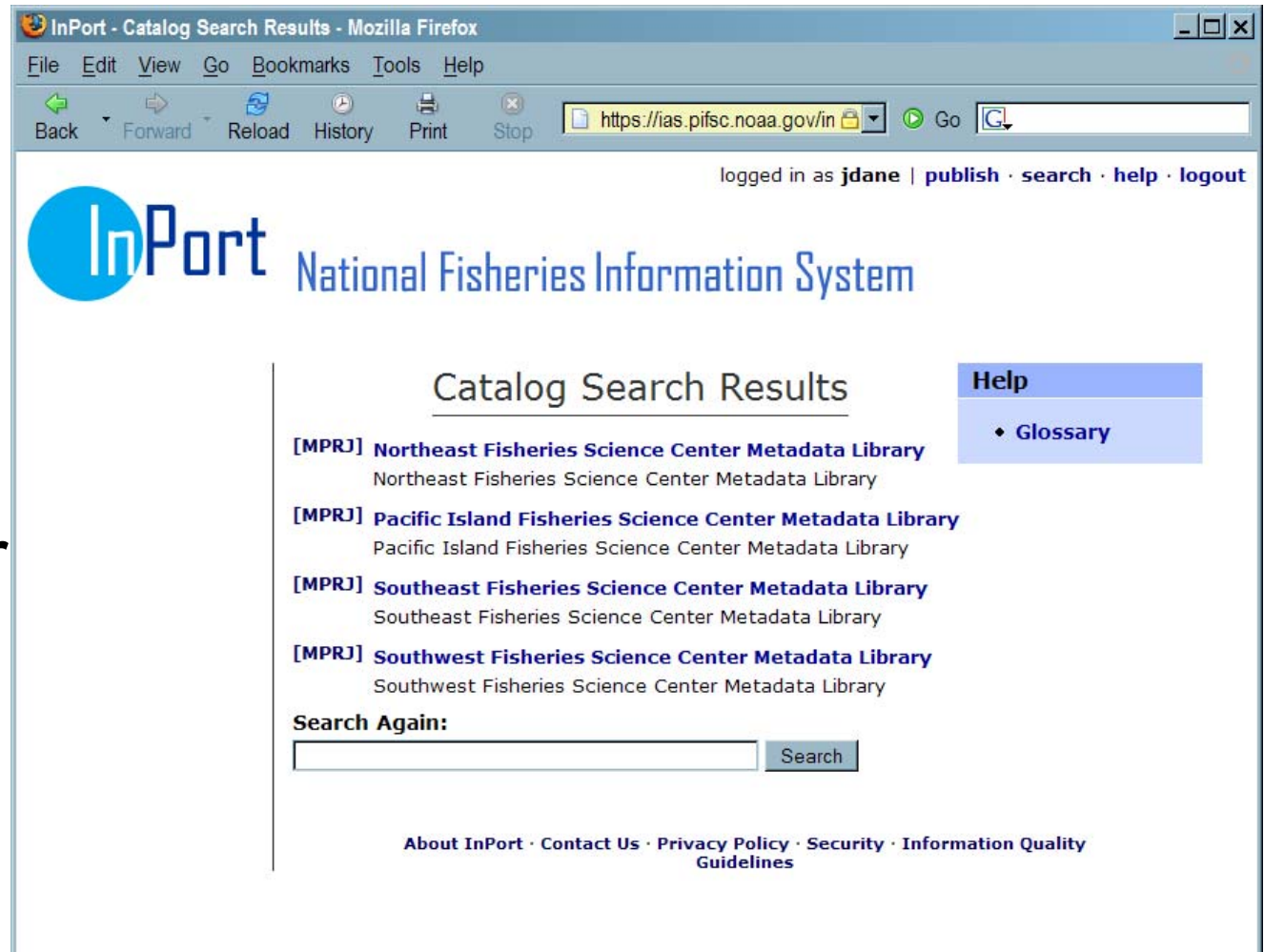
**Search the Catalog (...or see some advanced search options)**

**About InPort ...**

The FIS InPort Metadata Catalog should give NOAA Fisheries and its state and regional partners the capability to share essential information about fisheries-dependent data. As envisioned in the NOAA and NOAA Fisheries 2003-2008 strategic plans, by 2008, NOAA Fisheries' six Regions will be expected to manage the nation's marine resources under an ecosystems-based regimen very different from what has been used in the past. By storing information about all NMFS data holdings, InPort is expected to play a critical supporting role in fisheries management.

**More information...**

Listing of  
catalog  
items with  
“library” in  
the title,  
abstract, or  
description


A screenshot of a web browser window titled "InPort - Catalog Search Results - Mozilla Firefox". The address bar shows the URL "https://ias.pifsc.noaa.gov/in". The page header includes the InPort logo and the text "National Fisheries Information System". A user is logged in as "jdane" with links for "publish", "search", "help", and "logout". The main content area is titled "Catalog Search Results" and lists four items, each starting with "[MPRJ]" and followed by a title and a description. A "Search Again:" section with a text input field and a "Search" button is located below the list. A "Help" sidebar on the right contains a "Glossary" link. At the bottom, there are links for "About InPort", "Contact Us", "Privacy Policy", "Security", and "Information Quality Guidelines".

InPort - Catalog Search Results - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

Back Forward Reload History Print Stop <https://ias.pifsc.noaa.gov/in> Go

logged in as **jdane** | [publish](#) · [search](#) · [help](#) · [logout](#)

 National Fisheries Information System

### Catalog Search Results

**[MPRJ] Northeast Fisheries Science Center Metadata Library**  
Northeast Fisheries Science Center Metadata Library

**[MPRJ] Pacific Island Fisheries Science Center Metadata Library**  
Pacific Island Fisheries Science Center Metadata Library

**[MPRJ] Southeast Fisheries Science Center Metadata Library**  
Southeast Fisheries Science Center Metadata Library

**[MPRJ] Southwest Fisheries Science Center Metadata Library**  
Southwest Fisheries Science Center Metadata Library

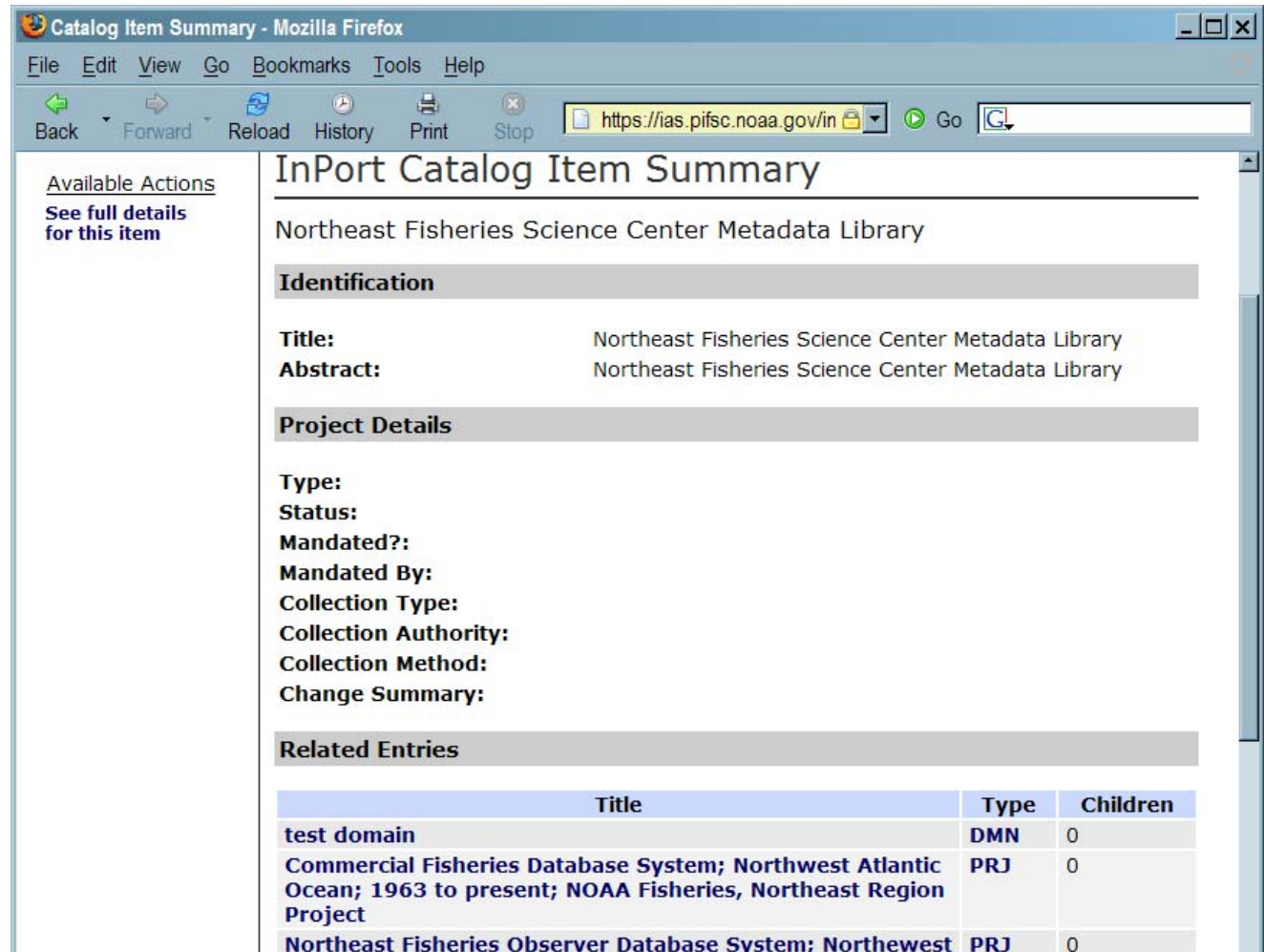
**Search Again:**

[Help](#)  
• [Glossary](#)

[About InPort](#) · [Contact Us](#) · [Privacy Policy](#) · [Security](#) · [Information Quality Guidelines](#)

# Summary of a Library

Each Fisheries Science Center will have its own metadata library.



**Available Actions**  
See full details for this item

## InPort Catalog Item Summary

### Northeast Fisheries Science Center Metadata Library

#### Identification

**Title:** Northeast Fisheries Science Center Metadata Library  
**Abstract:** Northeast Fisheries Science Center Metadata Library

#### Project Details

**Type:**  
**Status:**  
**Mandated?:**  
**Mandated By:**  
**Collection Type:**  
**Collection Authority:**  
**Collection Method:**  
**Change Summary:**

#### Related Entries

Title	Type	Children
test domain	DMN	0
Commercial Fisheries Database System; Northwest Atlantic Ocean; 1963 to present; NOAA Fisheries, Northeast Region Project	PRJ	0
Northeast Fisheries Observer Database System; Northwest	PRJ	0

## The Pacific Islands Fisheries Science Center Library.

Catalog Item Summary - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

Back Forward Reload History Print Stop <https://ias.pifsc.noaa.gov/in> Go

[Available Actions](#)  
[See full details for this item](#)

### InPort Catalog Item Summary

Pacific Island Fisheries Science Center Metadata Library

**Identification**

**Title:** Pacific Island Fisheries Science Center Metadata Library  
**Abstract:** Pacific Island Fisheries Science Center Metadata Library

**Project Details**

**Type:**  
**Status:**  
**Mandated?:**  
**Mandated By:**  
**Collection Type:**  
**Collection Authority:**  
**Collection Method:**  
**Change Summary:**

**Related Entries**

Title	Type	Children
<a href="#">FIS Data Management Tools</a>	PRJ	3
<a href="#">Hawaii Longline Logbook (DEV)</a>	PRJ	1
<a href="#">Hawaii Longline Observer Program - Test</a>	PRJ	4
<a href="#">InPort dev project</a>	PRJ	1
<a href="#">Pacific Islands Logbook (1990 to present) Project</a>	PRJ	1

## Southeast's metadata library

Catalog Item Summary - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

Back Forward Reload History Print Stop <https://ias.pifsc.noaa.gov/in> Go

[Available Actions](#)  
[See full details for this item](#)

### InPort Catalog Item Summary

#### Southeast Fisheries Science Center Metadata Library

#### Identification

**Title:** Southeast Fisheries Science Center Metadata Library  
**Abstract:** Southeast Fisheries Science Center Metadata Library

#### Project Details

**Type:**  
**Status:**  
**Mandated?:**  
**Mandated By:**  
**Collection Type:**  
**Collection Authority:**  
**Collection Method:**  
**Change Summary:**

#### Related Entries

Title	Type	Children
PRJ SE Observer (1992 to Present) Project	PRJ	1
SE Fisheries Logbook System (1986 to present) Project	PRJ	0
SE Landings (1960 to present) Project	PRJ	0
SE Trip Interview Program Project	PRJ	0

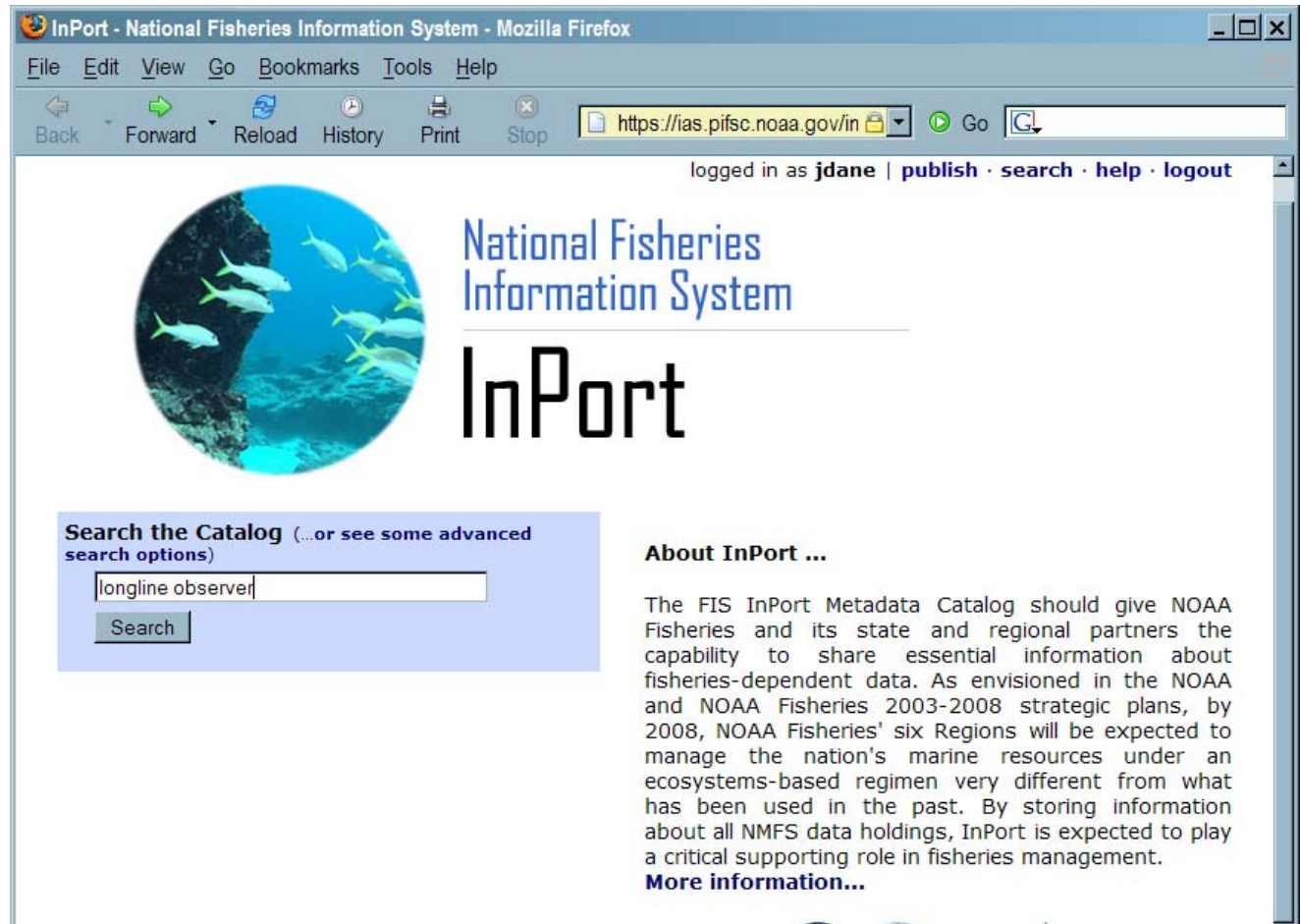




# Search: observer longline

You can  
search  
with more  
specific  
terms.

Example:  
observer  
longline



Catalog  
items  
matching  
“observer”  
and  
“longline”

## Catalog Search Results

[Help](#)

- Glossary

**[DS] Longline Observer Data System (LODS) Data Set**

The Hawaii Longline Observer Program collects gear type and effort data, environmental data, (sea state and sea surface temperature), protected species interaction and sighting data, and fish life history data. Observers record temperature and sea state daily, record all fish kept and released for species ...

**[ENT] Table: LOP\_TRIP\_TYPE**

Reference code table for types of observer longline trips. Legacy data; not recorded in LODS.

**[ENT] Table: TRIPS**

Table containing data about a specific longline trip. Data includes the trip number; date and time of departure and arrival departure and arrival ports; vessel name; vessel length; operator name; the observer's id and trip comments.

**[ENT] View: LOP\_TRIPS\_V**

View containing data about a specific longline trip. Data includes the trip number; date and time of departure and arrival departure and arrival ports; vessel name; vessel length; operator name; the observer name and trip comments. Data entry/edit view.

**[PRJ] Hawaii Longline Observer Program - Test**

National Marine Fisheries Service (NMFS), Pacific Islands Regional Office (PIRO) collects data on gear configuration, catch composition, length frequencies, fishing effort, and protected species interactions through observers aboard vessels in the Hawaii-based pelagic longline fishery. The fishery started ...

**[PRJ] PRJ SE Observer (1992 to Present) Project**

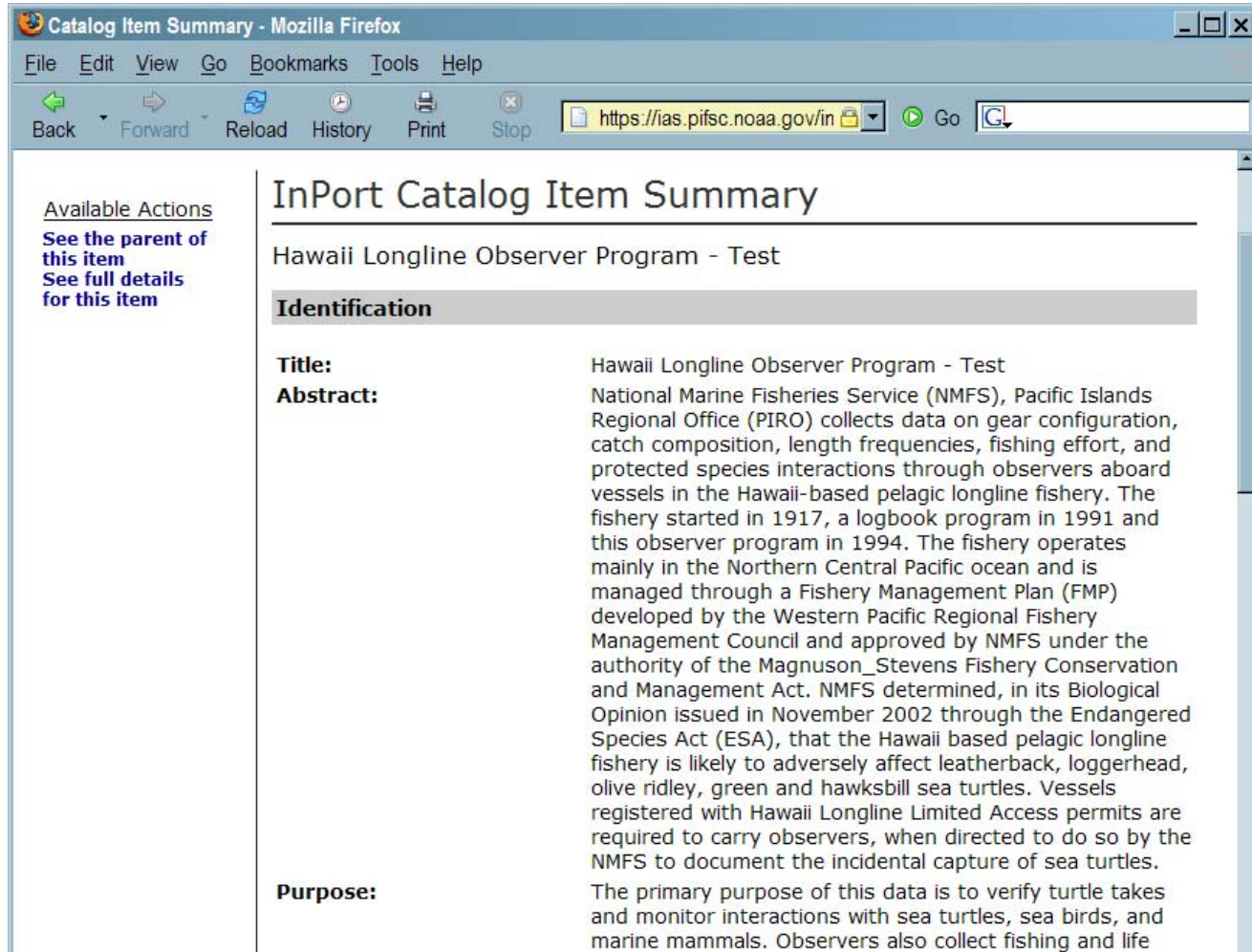
Done

ias nifsc noaa gov



# Item Summary: project

Each catalog item will have a title, abstract, and other descriptive information



**Available Actions**  
[See the parent of this item](#)  
[See full details for this item](#)

## InPort Catalog Item Summary

### Hawaii Longline Observer Program - Test

#### Identification

**Title:** Hawaii Longline Observer Program - Test

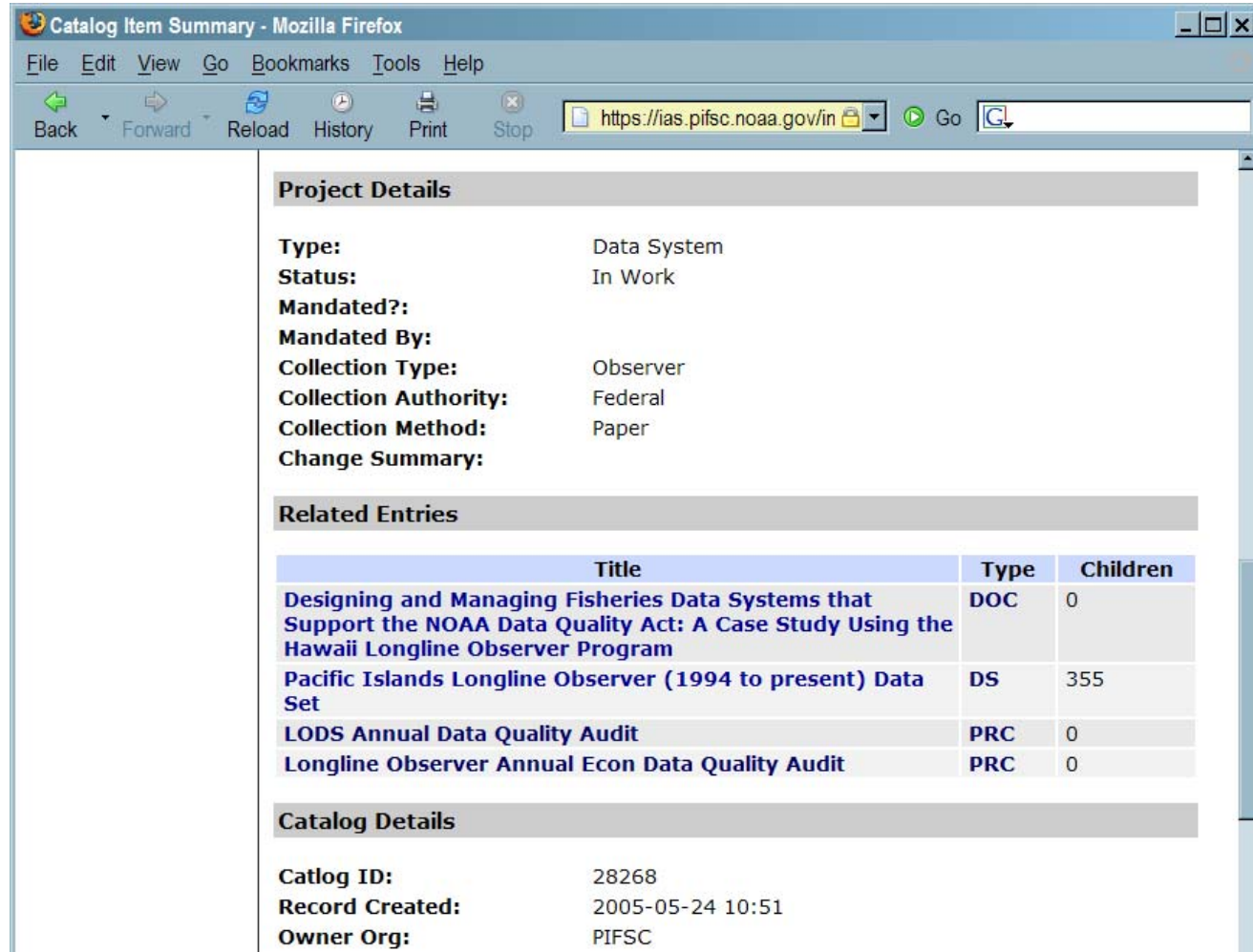
**Abstract:** National Marine Fisheries Service (NMFS), Pacific Islands Regional Office (PIRO) collects data on gear configuration, catch composition, length frequencies, fishing effort, and protected species interactions through observers aboard vessels in the Hawaii-based pelagic longline fishery. The fishery started in 1917, a logbook program in 1991 and this observer program in 1994. The fishery operates mainly in the Northern Central Pacific ocean and is managed through a Fishery Management Plan (FMP) developed by the Western Pacific Regional Fishery Management Council and approved by NMFS under the authority of the Magnuson-Stevens Fishery Conservation and Management Act. NMFS determined, in its Biological Opinion issued in November 2002 through the Endangered Species Act (ESA), that the Hawaii based pelagic longline fishery is likely to adversely affect leatherback, loggerhead, olive ridley, green and hawksbill sea turtles. Vessels registered with Hawaii Longline Limited Access permits are required to carry observers, when directed to do so by the NMFS to document the incidental capture of sea turtles.

**Purpose:** The primary purpose of this data is to verify turtle takes and monitor interactions with sea turtles, sea birds, and marine mammals. Observers also collect fishing and life

# Details about a project

InPort lists  
details about  
the project:  
area,  
procedures,  
faqs

This project  
includes a  
data set and  
some  
documentatio



**Catalog Item Summary - Mozilla Firefox**

File Edit View Go Bookmarks Tools Help

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**Project Details**

Type: Data System  
Status: In Work  
Mandated?:  
Mandated By:  
Collection Type: Observer  
Collection Authority: Federal  
Collection Method: Paper  
Change Summary:


**Related Entries**

Title	Type	Children
<a href="#">Designing and Managing Fisheries Data Systems that Support the NOAA Data Quality Act: A Case Study Using the Hawaii Longline Observer Program</a>	DOC	0
<a href="#">Pacific Islands Longline Observer (1994 to present) Data Set</a>	DS	355
<a href="#">LODS Annual Data Quality Audit</a>	PRC	0
<a href="#">Longline Observer Annual Econ Data Quality Audit</a>	PRC	0

**Catalog Details**

Catlog ID: 28268  
Record Created: 2005-05-24 10:51  
Owner Org: PIFSC

## Abstract about the LODS data set or database



National Fisheries Information System

login · search · help

[Available Actions](#)  
[See the parent of this item](#)  
[See full details for this item](#)

### InPort Catalog Item Summary

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#### Longline Observer Data System (LODS) Data Set

**Identification**

**Title:** Longline Observer Data System (LODS) Data Set

**Abstract:** The Hawaii Longline Observer Program collects gear type and effort data, environmental data, (sea state and sea surface temperature), protected species interaction and sighting data, and fish life history data. Observers record temperature and sea state daily, record all fish kept and released for species composition, measure all retained tunas, billfish, and sharks, along with the primary duty of recording all protected species interactions. Additionally observers are directed to collect various biological samples as needed by researches.

**Data Access Information**

**Entity Attribute Overview:** The Hawaii Longline Observer Program collects gear type and effort data, environmental data, (sea state and sea surface temperature), protected species interaction and sighting data, and fish life history data. Observers record temperature and sea state daily, record all fish kept and released for species

# Typical fishery data

Much of fisheries data is time-series information stored in tables or files.

The tables record details about activities relevant to fishery performance.

Overview:

type and effort data, environmental data, (sea state and sea surface temperature), protected species interaction and sighting data, and fish life history data. Observers record temperature and sea state daily, record all fish kept and released for species composition, measure all retained tunas, billfish, and sharks, along with the primary duty of recording all protected species interactions. Additionally observers are directed to collect various biological samples as needed by researchers.

**Security Classification**

Security Handling  
Description:

**Data Quality Information**

Maintenance Frequency:  
Usage Constraints:

**Related Entries**

Title	Type	Children
Table: BILLFISH_LEGACY	ENT	0
Table: BILLFISH_LEGACY_HIST	ENT	0
Table: BIRDS	ENT	0
Table: BIRDS_HIST	ENT	0
Table: BIRD_MITIG	ENT	0
Table: BIRD_MITIG_HIST	ENT	0
Table: CATCH	ENT	0
Table: CATCH_HIST	ENT	0
Table: CATCH_MV	ENT	0

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# InPort Ex: Fisheries table – A set

Example: A set record describes activity that starts with putting fishing lines in the water and ends with pulling them out.

[Available Actions](#)  
[See the parent of this item](#)  
[See full details for this item](#)

## InPort Catalog Item Summary

Table: SET\_ENVIRON

**Identification**

**Title:** Table: SET\_ENVIRON

**Abstract:** Table containing data about the physical environment in which a set/haul occurred. Data includes position (latitude/longitude), weather, beaufort, sea surface temperature, date and time of the set and haul. Also contains the gear soak time and logbook page number.

**Supplemental Information:** Loaded by batch 419, 05-24-2005 11:10

**Entity Details**

**Entity Name:**

**Schema Name:** NEWOBS

**Description:** Table containing data about the physical environment in which a set/haul occurred. Data includes position (latitude/longitude), weather, beaufort, sea surface temperature, date and time of the set and haul. Also contains the gear soak time and logbook page number.

**Network Address URL:**

**Active Version?:** Y

**Change Summary:**

**Attribute Summary**

# Details -- table columns

InPort  
stores  
table  
columns  
(attribute  
s)

Catalog Item Summary - Mozilla Firefox

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**Identification**

**Title:** Table: SET\_ENVIRON

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**Network Address URL:**

**Active Version?:** Y

**Change Summary:**

**Attribute Summary**

Name	Data Type	Required?	PKey?	Min Len	Max Len
T_TRIP_NUM	VARCHAR2	Y	Y		6
SET_NUM	NUMBER	Y	Y		22
SET_BEGIN_TEMP	NUMBER	N	N		22



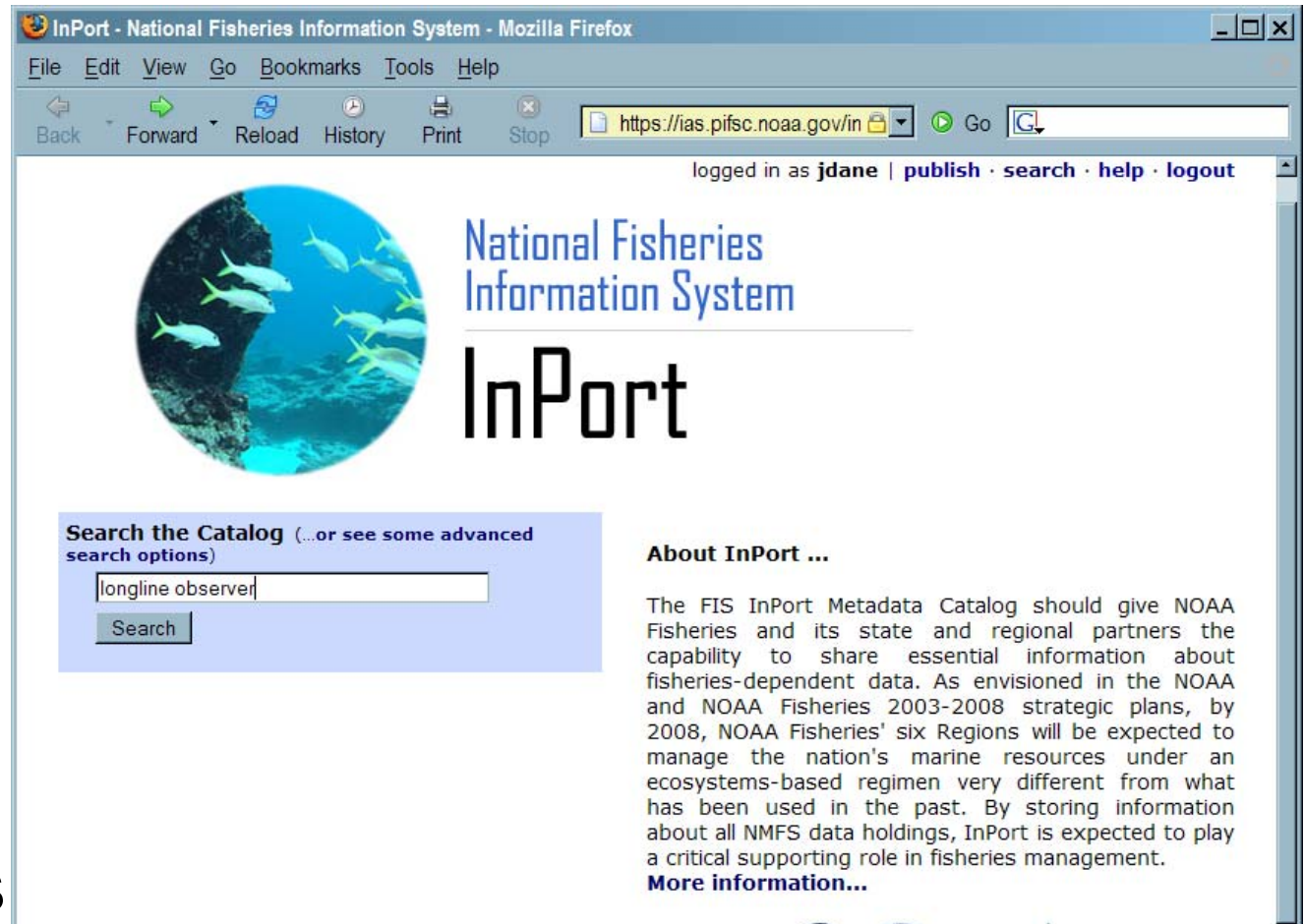
# Details about columns

InPort  
stores  
details  
about  
each  
column o  
attribute

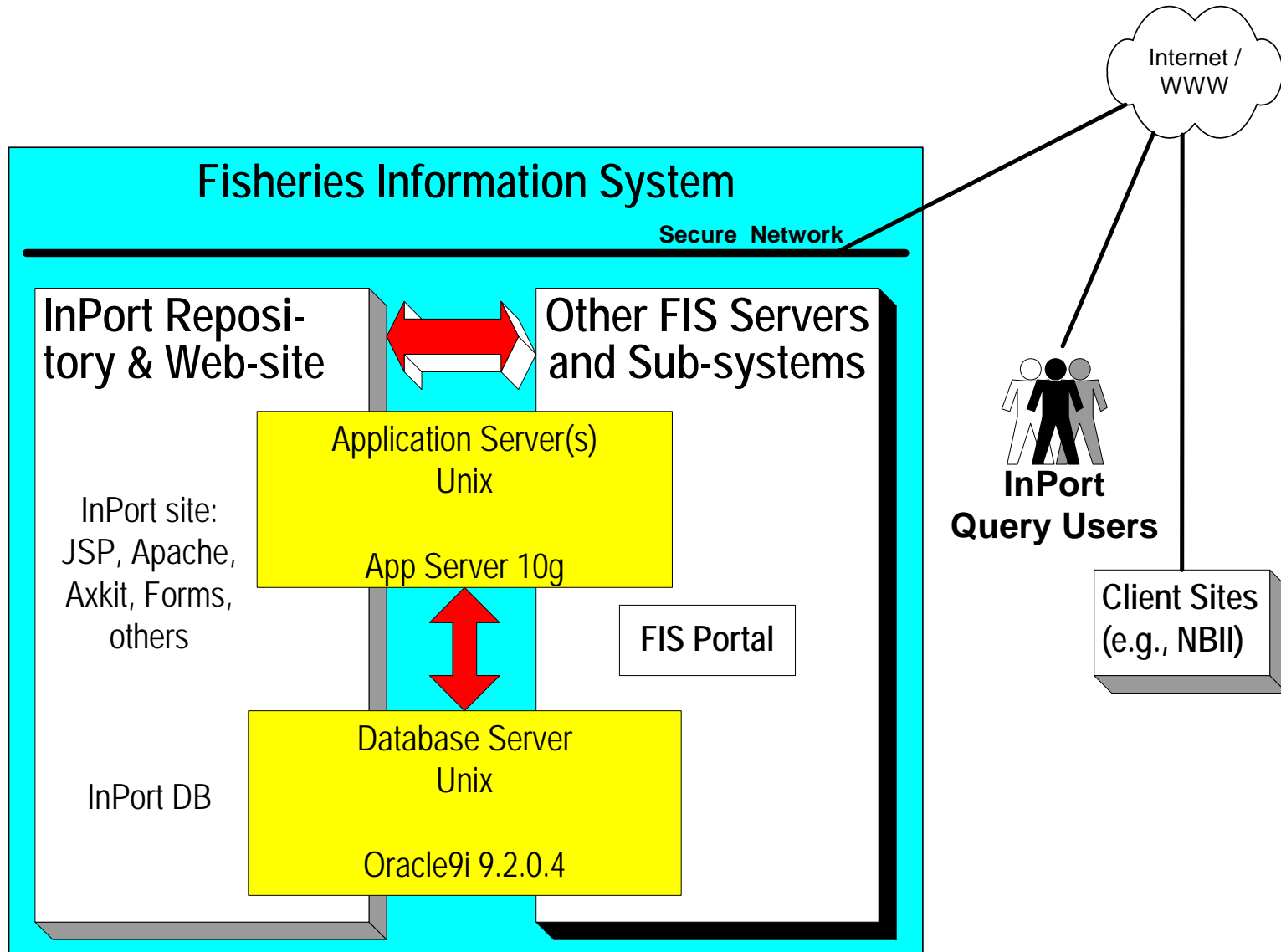
Catalog Item Details - Mozilla Firefox	
File Edit View Go Bookmarks Tools Help	
Back Forward Reload History Print Stop <a href="https://ias.pifsc.noaa.gov/in">https://ias.pifsc.noaa.gov/in</a> Go	
<b>Name:</b>	SET_INTERACT_YN
<b>Version:</b>	
<b>Status:</b>	Active
<b>Description:</b>	Was there interaction with protected species during setting operations?(Y/N)
<b>Primary Key?:</b>	N
<b>Required?:</b>	N
<b>Null Value?:</b>	
<b>Null Value Meaning:</b>	
<b>Data Type:</b>	CHAR
<b>Storage Type:</b>	
<b>Max Len:</b>	1
<b>Min Len:</b>	
<b>Precision:</b>	
<b>Scale:</b>	
<b>Unit of Measure:</b>	
<b>Case Restriction:</b>	
<b>Format Mask:</b>	
<b>Allowed Values:</b>	
<b>Derrivation:</b>	
<b>Default Value:</b>	
<b>Validation Rules:</b>	
<b>FKey Relations:</b>	
<b>Display Example:</b>	
<b>Name:</b>	HAUL_INTERACT_YN

You can  
search all  
published  
catalog  
items.

InPort shows  
search  
results,  
summaries  
and details.

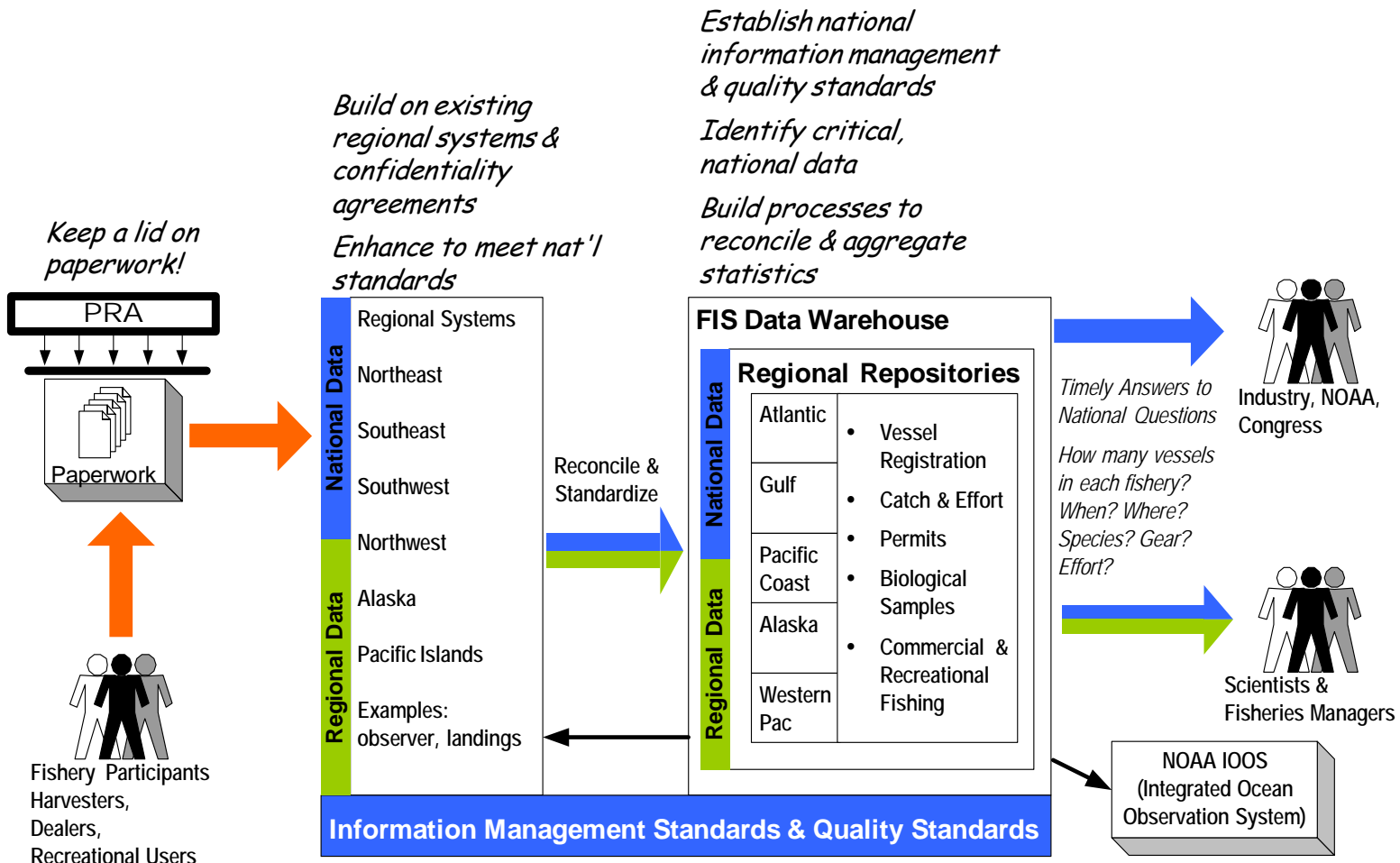






## Fisheries Information System

*How to Improve & Integrate Fisheries Statistics*





# Project Description

## **InPort Application Maintenance and Support**

- Application website and the database
- Problem diagnosis and resolution assistance
- bug fixes and minor enhancements
- support for testers during operating system, database, and application server upgrades

## **Production Support (system admin and metadata entry)**

- backup & recovery
- server, network, or database security
- server, network, or database availability
- end-user support activities such as help desk or training

## **Data Administration**

- Support and administer the overall support of InPort to coordinate/maintain data entry upgrades, user accounts, etc.

# Project Objectives and Goals

## Objectives:

- Keep InPort system available to FIS partners and other users
- Add new features to support current and planned FIS projects and activities (as funds permit)

## Goals for InPort Phase 2

- To keep InPort system available to FIS partners & other users
- To add features to support current and planned FIS projects & activities
- To support standard discovery-level metadata interfaces and search capabilities
- To support testing and migration of future releases

# Project Risks/Problem Areas

- Management support
  - Need for long term administrative and data maintenance support
  - Commitment from regional and partners' data managers to use the system
  - Resources for metadata training and entry
- Schedule – delays due to resources, CR, staffing
- Technology – getting PIFSC and ST systems to common releases

## Expected Outcomes/Benefits in FY08

### Expected benefits include

- Fisheries “data managers” metadata tool
- Support metadata needs of FIS portfolio projects
- One stop shop for Fisheries metadata
- Support FIS architecture
- Tool for publishing FIS standards
- Support fisheries data quality
- Promote common and best practices